

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number
WO 2005/049629 A1

(51) International Patent Classification⁷: **C07F 9/6568**

Zur Marienruhe 13, 63579 Freigericht (DE). MEICHEL-
BÖCK, Wilfried [DE/DE]; Albrecht-Dürer-Strasse 25,
82152 Krailling (DE).

(21) International Application Number:
PCT/EP2004/012279

(74) Common Representative: DEGUSSA AG; Intellectual
Property Management, Patente und Marken, Standort
Hanau, Postfach 13 45, 63403 Hanau (DE).

(22) International Filing Date: 29 October 2004 (29.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
103 53 831.3 18 November 2003 (18.11.2003) DE

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB,
GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except US): DE-
GUSSA AG [DE/DE]; Bennigsenplatz 1, 40474 Düssel-
dorf (DE).

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): Eurasian (AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RIERMEIER,
Thomas [DE/DE]; Finkenweg 8, 61130 Nidderau-Os-
theim (DE). MONSEES, Axel [DE/DE]; Falkstrasse 46,
60487 Frankfurt (DE). ALMENA PEREA, Juan José
[ES/DE]; Salisweg 30B, 63454 Hanau (DE). KADYROV,
Renat [RU/DE]; Bechtenwaldstrasse 77, 65931 Frankfurt
(DE). GOTOV, Battengel [MN/DE]; c/o Tobias Eckardt,
Tempelstrasse 87, 50679 Köln (DE). ZEISS, Werner
[DE/DE]; Am Anger 2A, 82547 Eurasburg (DE). NAGL,
Iris [DE/DE]; Drachenseestrasse 6, 81373 München (DE).
BÖRNER, Armin [DE/DE]; Im Winkel 40, 18055 Ros-
stock (DE). HOLZ, Jens [DE/DE]; Alt-Roggentiner Weg
14, 18196 Kessin (DE). DRAUZ, Karlheinz [DE/DE];

Declaration under Rule 4.17:

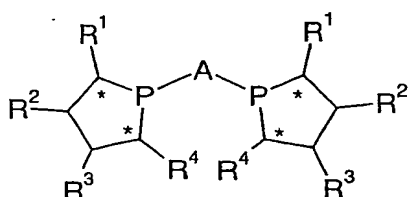
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR PREPARING BISPHOSPHOLANE LIGANDS



(I)

(57) Abstract: The present invention is directed at a process for
preparing enantiomerically enriched compounds of the general
formula (I). Compounds of the type shown are employed in catalyst
systems.